REMARKS

Favorable reconsideration and allowance of this application are requested.

1. Discussion of Amendments

By way of the amendment instructions above, the pending claims have been amended so as to clarify the claimed subject matter and to address the criticisms giving rise to the rejections under 35 USC §112, second paragraph.

Claim 6 has been canceled and replaced by new claim 10 which is dependent from the amended version of claim 9. As will be observed, both claims 9 and 10 have been recast in a product-by-process format wherein the former defines an injection-molded product generally made by injection molding a composition pellet of claim 1, while the latter clarifies that the injection-molded product is a planar socket for a semiconductor device. Since each of claims 9 and 10 is now properly in a product-by-process format, withdrawal of the objection raised under 37 CFR §1.75(c) is in order.

Following entry of this amendment, claims 1-5 and 7-10 will remain pending herein for consideration.

2. Explanation of the Amount "x" of the Resin Feed

The term "x" is a weight fraction of the total amount of the feed pellets comprised of resin (A) based on the resin weight which is fed to the extruder through the main feed port. (See in this regard, page 13, line 20 bridging page 14, line 2 and the description of resin (A) on page 20, line 17 as a "pellet".) Thus, the other weight fraction of the total amount of the feed pellets comprised of resin (A) based on the resin weight is fed through the side-feed port of the extruder located downstream of the main feed port and is expressed as 1-x. The weight ratio x/(1-x) of the feed pellets of the resin (A) is therefore not a percentage but instead is a dimensionless

number which in preferred embodiments is 50/50 to 10/90, preferably 40/60 to 15/85 (see page 14, line 2).

The specification and Table 1 have been amended appropriately so as to provide conforming clarifying revisions. In this regard, with respect to the amendment to Table 1, it will be noted that the amounts of the resin (A) are fed through the main feed port 1 and the side-feed port 3 are expressed as a weight% of the total *composition* weight (i.e., the total weight of the resin (A) plus the fibrous filler (B)) and thus do not represent "x" or "1-x", respectively. The weight ratio (x/(1-x)) is thus calculated in Table 1 based on the total weight of the resin (A) – i.e., without regard to the weight of the fibrous filler (B) – in the composition.

3. Response to 35 USC §112 Rejections

The amendments to the claims noted above and the discussion of "x" in section 2 above are believed to resolve the issues raised under 35 USC §112, second paragraph.

In this regard, the differences between the weight average fiber length (L) of the fibrous filler (B) fed to the extruder through the side-feed port and the weight average fiber length (l) which occurs as a result of the melt-blending of the resin (A) and the fibrous filler (B) have been more clearly stated in the amended version of claim 1.

In addition, the side-feed port has been clarified as being "downstream" of the main feed port as clearly seen in FIG. 1.[1]

Withdrawal of the rejections advanced under 35 USC §112 is therefore in order.

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[1] Contrary to the statement in the Official Action at page 3, lines 2-3, the side-feed port 3 is actually downstream of the main feed port 1. Thus, the main feed port 1 is upstream of the side-feed port 3. This lexicon is also consistent with claim 7 in reference to FIG. 1 which requires the side-feed port 3 to be positioned downstream of the plasticizing zone 2.

4. Response to 35 USC §103(a) Rejections

The prior pending claims attracted several rejections under 35 USC §103(a) based principally on the combination of Koizumi et al (USP 5,883,159) in view of Hawley (USP 5,185,117). Specifically, claims 1, 3, 5-6 and 9 attracted a rejection under 35 USC §103(a)[2] based on Koizumi et al and Hawley, with Seiichi et al (JP - 6240114) and Waggoner (USP 5,110,896) being combined respectively with Koizumi et al and Hawley to rejection claim 2 on the one hand and claims 4 and 8 on the other hand. Finally, Seiichi et al and Baba (USP 5,149,486) have been combined with Koizumi et al and Hawley to separately reject claim 7. Applicants suggest that none of the applied references is appropriate to reject the presently pending claims under 35 USC §103(a).

The presently claimed invention is especially characterized by the feeding of one part (x) of a total amount of the feed pellets comprised of resin (A) in a main feed port of an extruder, and feeding a fibrous filler (B) having a weight average length (L) together with another part (1-x) of the total amount of the feed pellets comprised of resin (A) at a side-feed port of the extruder located ***downstream*** of the extruder's main feed port.

In such a manner, the part (x) of the feed pellets comprised of resin (A) fed through the main feed port is allowed to plasticize as it travels through the extruder barrel toward the side-feed port. Feeding of the other part (1-x) of the resin (A), which of course are in the form of solid pellets, together with the fibrous filler (B) through the side-feed port of the extruder assists in the breakage of the fiber length (L) of the filler (B) fibrous as the parts x and 1-x of the resin (A) and the fibrous filler (B) are melt-blended with one another to achieve a weight average length (l) in the resin composition pellet.

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[2] The Examiner did not include claims 6 and 9 specifically in his statement of rejection in paragraph 10 on page 3 of the Official Action, but does address such claims in paragraphs 26-2 on page 6 of the Official Action. Thus, for purpose of this response, applicants assumes that the Examiner intended to reject prior claims 1,3, 5-6 and 9 under 35 USC §103(a) based on the combination of Koizumi et al and Hawley.

Therefore according to the presently claimed invention, a starting fibrous filler (B) having a weight-average fiber length of 2 mm or more is broken or cut by the action of the part (1-x) of the feed pellets comprised of the resin (A) so as to achieve a weight-average fiber length (l) of from 180 μm to 360 μm. In the resulting composition pellets, therefore, the resin (A) and fibrous filler (B) are melt-blended uniformly so that the weight-average fiber length (l) of the fibrous filler (B) in the composition pellets is from 180 μm to 360 μm.

The composition pellets obtained by the claimed method therefore provide injection-molded articles, e.g., sockets for a semiconductor device, having unexpectedly improved mechanical properties. Moreover, the claimed invention prevents the resin (A) from degrading and also can be accomplished economically with conventional extruders.

In especially preferred embodiments, when the resin (A) is a liquid crystal polymer, the advantages note above are especially remarkable since know art techniques find it quite difficult to obtain comparable advantages for a liquid crystal polymer that are obtained by practicing the presently claimed invention. Please see in this regard the data for Comparative Example 3 in the originally filed specification.

It is conventional in the art that a resin is fed into an extruder at the main feed port and a filler is fed at a side-feed port. As the resin progressed from the main feed port to the side-feed port it becomes melted (plasticized). Thus, the filler fed via the side-feed port is mixed with a melt of the resin. As such, a fibrous filler having a weight average length in the resulting pellet as compared to the weight average length of the filler fed into the extruder cannot be obtained. For example, as demonstrated by Comparative Example 3 in the originally filed specification, the weight-average fiber length of the fibrous filler in the composition pellet is 420 μm.

Turning attention to the applied references of record, applicants note that Koizumi et al discloses a process for producing a composition in which polypropylene is mixed with glass fiber having an average fiber length of 400 μm to

800 μm. Koizumi et al thus fails to disclose the concept of the presently claimed invention wherein the total amount of the feed pellets comprised of a resin is divided among the main feed port and the side-feed port of an extruder.

Hawley et al discloses a thermoplastic resin mixed with a relatively long fiber filler material, e.g., 25.4 mm (one inch) or more. Hawley et al purportedly solves a problem caused by breaking down of the fiber length. Thus, Hawley et al specifically teaches directly away from the concept of the presently claimed invention wherein the length of a fibrous filler material is intentionally broken down by feeding on part of the feed pellets comprised of a resin through an extruder's main feed port and feeding a remaining part of the feed pellets comprised of the resin through an extruder's side-feed port.

In addition, Hawley et al discloses the use of two separate extruders -- one for extruding, the other for mixing. Thus, according to Hawley et al a melted resin and a heated fiber are mixed together so as to prevent fiber breakage from occurring.

In view of the above, therefore, the combination of Hawley et al and Koizumi et al fails to provide the presently claimed invention. Withdrawal of such references against the presently claimed invention is therefore in order.

The secondary references to Seeichi et al, Waggoner et al and Baba et al are noted as being of general interest to the subject matter of the claimed invention. However, none of such secondary references cures the defects noted above with respect to Koizumi et al and Hawley et al. As such, withdrawal of such references is also in order.

5. Fee Authorization

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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